

IN THE CLAIMS

This listing of the claim will replace all prior versions and listings of claim in the present application.

Listing of Claims

1. (currently amended) A cache control method in a data processing system having a computer, which includes a synchronous point processing unitsection, for executing a program, and a storage unit having a cache memory for storing data transmitted as a result of execution of said program, a cache controller having a cache management table and a disk device having memory medium for storing data stored in said cache memory,

wherein said synchronous point processing unit makes and sends a write request of updated data held in the memory medium of data processed by the program in a write-through mode to update data of the program

unreflected upon said disk device, issues a flushflash command to said storage unit in order to reflect the updated data upon the memory medium at a timing synchronous with a commitment to perform a transaction process, and makes and sends a write-request, in the write-through mode, to said storage unit for requesting write of a synchronous point journal which records, in the storage unit, completion of a synchronous point process until a check point from said computer to said storage unit,

wherein said cache controller of storage unit, responding to said flushflash command from said synchronous point processing unitsection, if a mode in said cache management table corresponding to a page for said flushflash command coincides with write-after, writes the page indicated by a

cache pointer for the page in said cache management table to said memory medium and changes a cache management entry in said cache management table to a state of reflected,

wherein said cache controller of said storage unit, responding to said write request, if a mode designated during said write request is write-after, writes data in said cache memory, and changes said cache management entry for the page to a state of unreflected, and

wherein said cache controller of said storage unit, responding to said write request, if said mode designated during said write request is not write-after, writes the page to both said cache memory and said memory medium, thereafter changes said cache management entry for the page to the state reflected.

Claims 2 (canceled).

3. (currently amended) The cache control method

according to claim 1, wherein each of said write request and said flushflash command includes area identification information for specifying areas in said cache memory, and

wherein when said write request is inputted, said transmitted data is stored in an area specified by the area identification information of said write request and when said flushflash command is inputted, the data stored in the area specified by the area identification information of said write request is stored in said disk device.

Claim 4 (canceled).

5. (previously presented) The cache control method according to claim 3, wherein the area identification information of said cache memory includes volume identification information and segment identification information.

6. (currently amended) A data processing system comprising:
a computer, which includes a synchronous point processing unitsection, for executing a program, and
a storage unit having a cache memory for storing data transmitted as a result of execution of said program, a cache controller having a cache management table and a disk device having memory medium for storing data stored in said cache memory,
wherein said synchronous point processing unitsection makes and sends a write request of updated data held in the memory medium of data processed by the program in a write-through mode to update data of the program unreflected upon said disk device, issues a flushflash command to said storage unit in order to reflect the updated data upon the memory medium at a timing synchronous with a commitment to perform a transaction process, and makes and sends a write request, in the write-through mode, to said storage unit for requesting write of a synchronous point journal which records, in the storage unit, completion of a synchronous point process until a check point from said computer to said storage unit,

wherein said cache controller of said storage unit, responding to said flushflash command from said synchronous point processing unitsection, if a mode in said cache management table corresponding to a page for said flushflash command coincides with write-after, writes the page indicated by a cache pointer for the page in said cache management table to said memory medium and changes a cache management entry in said cache management table to a state of reflected,

wherein said cache controller of said storage unit, responding to said write request, if a mode designated during said write request is write-after, writes data in said cache memory, and changes said cache management entry for the page to a state of unreflected, and

wherein said cache controller of said storage unit, responding to said write request, if said mode designated during said write request is not write-after, writes the page to both said cache memory and said memory medium, thereafter changes said cache management entry for the page to the state of reflected.

Claim 7 (canceled).

8. (currently amended) The data processing system according to claim 6, wherein each of said write request and said flushflash command includes area identification information for specifying areas in said cache memory, and wherein when said write request is inputted, said transmitted data is stored in an area specified by the area identification information of said write request and when said flushflash command is inputted, the data stored

in the area specified by the area identification information of said write request is stored in said disk device.

Claim 9 (canceled).

10. (previously presented) The data processing system according to claim 8, wherein the area identification information of said cache memory includes volume identification information and segment identification information.

11. (currently amended) A computer-readable medium having stored thereon a data processing program for functioning a data processing system having a computer, which includes a synchronous point processing unitsection, which executes said data processing program, and a storage unit having a cache memory for storing data transmitted as a result of execution of said program, a cache controller having a cache management table and a disk device having memory medium for storing data stored in said cache memory, wherein said data processing program when executed causes the steps to be performed of:

in said synchronous point processing unitsection making and sending a write request of updated data held in the memory medium of data processed by the program in a write-through mode, thereby to update data of the program unreflected upon said disk device, issuing a flushflash command to said storage unit in order to reflect the updated data upon the memory medium at a timing synchronous with a commitment to perform a transaction

process, onto said memory medium, and making and sending a write request, in the write-through mode, to said storage unit for requesting write of a synchronous point journal which records, in the storage unit, completion of a synchronous point process until a check point from said computer to said storage unit,

in said cache controller of said storage unit, in response to said flushflash command from said synchronous point processing unitsection, if a mode in said cache management table corresponding to a page for said flushflash command coincides with write-after, writing the page indicated by a cache pointer for the page in said cache management table to said memory medium and changing a cache management entry in said cache management table to a state of reflected,

in said cache controller of said storage unit, in response to said write request, if a mode designated during said write request is write-after, writing data in said cache memory, and changing said cache management entry for the page to a state of unreflected, and

in said cache controller of said storage unit, in response to said write request, if said mode designated during said write request is not write-after, writing the page to both said cache memory and said memory medium, thereafter changing said cache management entry for the page to the state of reflected.